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John O. Moody

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11/16/2004

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EXAMINER

NGUYEN, NAM V

ART UNIT

PAPER NUMBER

2635

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/692,538

Applicant(s)

MOODY ET AL.

Examiner

Nam V Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This communication is in response to applicant's response to an Amendment which is filed August 9, 2004.

An amendment to the claims 1 and 6 has been entered and made of record.

Claims 1-15 are pending.

Response to Arguments

Applicant's amendments to the rejected claims are insufficient to distinguish the claimed invention from the cited prior arts or overcome the rejection of said claims under 35 U.S.C § 102(e) as discussed below. Applicant's amendment and argument with respect to the pending claims 1-15, filed August 9, 2004, have been fully considered but they are not persuasive for at least the following reasons.

On page 10, Applicant's arguments with respect to the invention in Carter et al. does not teach or suggest that the "means for transmitting a signal that can be received by an access point of said standard data network and interpreted by an access point of said standard data network as identification information" is not persuasive.

As defined by claims 1 and 6, the patient-worn remote transceiver 34 or location-tracking transceiver 49 of Carter et al. include a small, battery powered transceiver, transmitter or transponder which transmits an ID signal to the location-tracking receivers 49A. The patient

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transceivers 34A, 36A include similar functionality to support the location-tracking of patients. As illustrated in FIG. 1, the system may also include single-WLAN, single-band access points 30B that implement only one of the two WLAN specifications. Each single-WLAN access point may be configured as either a realtime WLAN access point or a non-realtime WLAN access point. Single-WLAN access points may be desirable, for example, in regions of the hospital used primarily for one type of application (time-critical or non-time-critical) and not the other. For example, it may be desirable to provide several WMTS access points 30B within a step down ward or other high-volume patient area, as shown in FIG. 2. As will be recognized by the foregoing, the system can alternatively be implemented with single-WLAN access points 30B only, wherein some of the access points implement a realtime WLAN and other access points implement a non-realtime WLAN. The use of multi-WLAN access points, however, provides the important benefit of allowing the two different categories of wireless devices 34, 36 to share network access resources, thus reducing the quantity of access point resources and the cost of the installation (column 5 line 57 to column 6 line 22). The system includes multiple access points 30 that are interconnected by a hardwired hospital network 32. The access points 30 provide connectivity between the hospital network 32 and various types of wireless devices, including remote patient transceivers 34 used for realtime patient monitoring, and various type of devices 36 used for non-time-critical applications. The access points 30 are spatially distributed throughout the medical facility to provide zones or "cells" of coverage. The access points 30 communicate bi-directionally with the wireless devices 34, 36 using one or more wireless LAN (WLAN) protocols that support the mobility of devices from cell to cell. As described below, a realtime WLAN protocol may be used to communicate with the devices 34 used for time-critical

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applications, while a standard wireless LAN protocol such as that of IEEE 802.11 may be used to communicate with the other devices 36 (column 3 lines 48 to 65; see Figures 1 and 2). One skilled in the art understands that a patient-worn remote transceiver transmits a signal that can be received by said wireless LAN access points of said a hospital local area data network as identification information.

Furthermore, Carter et al. disclose any of a variety of alternative transceiver designs and protocols that support the realtime transmission of data may be used. The physiologic data collected from the patient transceivers 34 is made available for realtime viewing and monitoring on the hospital network 32 via the central monitoring stations 38. This may be accomplished, for example, using protocols layered on UDP/IP multicasting, or by using other realtime network data transfer methods that are known in the art such as RSVP (Resource Reservation Protocol) and RTP (Realtime Transport Protocol). The physiologic data may also be stored in a database of the physiologic data server 46 for subsequent retrieval. The various non-realtime WLAN devices 36 in the preferred embodiment are commercially-available devices that include off-the-shelf 802.11 wireless modems. The system may also include wireless devices that use both types of WLANs (e.g., a patient transceiver 34 which includes an 802.11 transceiver for voice communications) (column 5 lines 23 to 40; see Figure 3). Carter et al. clearly disclose patient-worn remote transceivers detectable by said wireless LAN access points of said computer network, said patient-worn remote transceivers including means for transmitting identification information in accordance with a wireless network protocol corresponding to said patient-worn remote transceivers. Therefore, Carter et al. disclose a transponder detectable by said wireless access points of said computer network.

Additionally, on page 10, Applicant's arguments with respect to the invention in Carter et al. does not teach or suggest that "detection of and/or communication with RFID transponders through the wireless network communication links" is not persuasive.

Carter et al. disclose the system includes multiple access points 30 that are interconnected by a hardwired hospital network 32. The access points 30 provide connectivity between the hospital network 32 and various types of wireless devices, including remote patient transceivers 34 used for realtime patient monitoring, and various type of devices 36 used for non-time-critical applications. The access points 30 are spatially distributed throughout the medical facility to provide zones or "cells" of coverage. The access points 30 communicate bi-directionally with the wireless devices 34, 36 using one or more wireless LAN (WLAN) protocols that support the mobility of devices from cell to cell. As described below, a realtime WLAN protocol of the wireless telemetry system may be used to communicate with the devices 34 used for time-critical applications, while a standard wireless LAN protocol such as that of IEEE 802.11 may be used to communicate with the other devices 36. Therefore, Carter et al. clearly disclose patient-worn remote transceivers detectable or in communication through the wireless network communication links.

On page 11, Applicant's amendment and arguments with respect to the invention in Carter et al. does not teach or suggest that the "communications with the transponders are performed in accordance with a wireless network protocol" is not persuasive.

Carter et al. disclose that a wireless local area network (WLAN) system comprises multiple access points that are distributed throughout a medical facility to provide wireless access to a hardwired network. The access points implement multiple WLAN protocols,

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including a realtime protocol for realtime patient monitoring (telemetry) and a standard WLAN protocol (such as IEEE 802.11 within an ISM band) for providing general-purpose wireless access. Some or all of the access points preferably implement both WLAN protocols such that the different WLANs and wireless device types share network access resources. Some or all of the access points may also include RF location-tracking modules which may be used to track locations of patients, hospital personnel, capital equipment, and/or disposable medical supplies (column 1 lines 46 to 60; see Figure 1). Therefore, Carter et al. clearly disclose communications with the patient-worn remote transceivers are performed in accordance with a wireless network protocol.

Clearly, Carter et al. disclose a transponder and an asset tracking system as recited in Claims 1 and 6. The examiner maintains that the references cited and applied in the last office actions for the rejection of the claims are maintained in this office action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002

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do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-2, 6-8 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Carter et al. (US# 6,659,947).

Referring to claims 1 and 6, Carter et al. disclose a transponder (49B) (i.e. a transponder for location tracking devices) and an asset tracking system (38) (i.e. a central monitoring stations) (column 1 lines 46 to column 2 line 17; see Figure 1) including

a computer network (38 to 48) (i.e. a wireless Local Area Networks system) supporting a plurality of wireless links from respective wireless access points (30) (i.e. a multi-WLAN access point and single-band WLAN access point) of said computer network (32) (i.e. a hospital network) (column 3 lines 47 to column 4 line 32; see Figure 1),

a transponder (34A or 49B) (i.e. a patient -worn remote transceiver or location tracking devices) detectable by said computer network (32), said transponder (34A or 49B) including means for transmitting identification information (i.e. an unique identification) in accordance with a wireless network protocol (i.e. an industry-standard WLAN protocol such as IEEE 802.11) corresponding to said transponder (49B) (column 4 lines 33 to 64; column 5 lines 20 to 57; column 6 lines 11 to 51; see Figure 2), and

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Means for accessing and reporting internal network access point information in association with said identification information (column 6 line 52 to column 7 line 33; see Figure 2).

Referring to claim 2, Carter et al. disclose a transponder as recited in claim 1, further including a memory (not label) and wherein said means for transmitting a signal includes means for transmitting signals representing data stored in said memory (column 6 lines 11 to 51).

Referring to claim 15, Carter et al. disclose a transponder as recited in claim 1, wherein said means for receiving an interrogation signal includes means for receiving an interrogation signal from an access point (30) of said standard wireless data network (32) (column 5 lines 20 to 57; see Figure 1).

Referring to claims 7 and 8, Carter et al. disclose a system as recited in claim 6, further including means for associating internal network access point information with geographical locations (column 6 lines 11 to 51).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carter et al. (US# 6,659,947) as applied to claim 2 above, and in view of Welles, II et al. (US# 5,691,980).

Referring to claim 3-5, Carter et al. disclose a system as recited in claim 2, however, Carter et al. did not explicitly disclose means for sensing a condition of said device and further including means responsive to a detected change of condition for controlling said means for transmitting a signal.

In the same field of endeavor of wireless communication system, Welles, II et al. teach that means for sensing a condition (68) of said device (10) (column 5 lines 27 to 38; see Figures 1 and 2) and further including means responsive to a detected change of condition for controlling said means for transmitting a signal (column 1 line 47 to column 2 line 16; column 5 lines 4 to 23) in order to transmit the condition of temperature or pressure of the unit to the central station.

One of ordinary skilled in the art recognizes the need to add sensors in the tracking units and a responsive to a detected change of condition of Welles, II et al. in location tracking and monitoring devices of Carter et al. because Carter et al. suggest it is desired to provide a physiologic data collected from a patient is made available for realtime viewing and monitoring on a network system (column 5 lines 20 to 40; see Figure 1) and Welles, II et al. teach that a tracking unit with sensor devices to communicate the messages and commands with the central station (column 4 lines 1 to 16) in order to enhance reliability of the communication. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to add sensors in the tracking units and a responsive to a detected change of condition of

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Welles, II et al. in a location tracking and monitoring devices of Carter et al. with the motivation for doing so would have been to provide the tracking asset system has the capability to independently determine and report the status of location tracking and monitoring devices remotely from a central monitoring station in a wireless LAN system.

Claims 9-10 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carter et al. (US# 6,659,947) as applied to claim 6 above, and in view of Stewart (US# 5,835,061).

Referring to claim 9, Carter et al. disclose a system as recited in claim 6, however, Carter et al. did not explicitly disclose further including means for determining proximity of said transponder to an access point.

In the same field of endeavor of communication service system, Stewart teaches that means for determining proximity of said transponder (5) (i.e. mobile unit) to an access point (10) (column 3 line 64 to column 4 line 7; see Figures 1-2) in order to send or to receive information which may include text, voice data and video data.

One of ordinary skilled in the art recognizes using an access point to determine a mobile unit is within the range of the access point of Stewart in a real time patient monitoring wireless LAN system of Carter et al. because Carter et al. suggest it is desired to provide a location tracking devices to be worn on a patient can be monitoring or tracking by the access points within a facility (column 6 lines 11 to 51; see Figure 1) and Stewart teaches that means for determining proximity of said a mobile unit to an access point (column 3 line 64 to column 4 line

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7; see Figures 1-2) in order to increase efficiently and to enhance reliability of the communication of an access point. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to use an access point to determine the mobile unit is within the range of the access point of Stewart in a real time patient monitoring wireless LAN system of Carter et al. with the motivation for doing so would have been to provide the tracking asset system has the capability to independently determine and report the status of the tag remotely from a central station.

Referring to claim 10, Carter et al. in view of Stewart disclose a system as recited in claim 9 above, Stewart disclose wherein said means for determining proximity includes triangulation means (column 6 lines 3 to 26).

Referring to claims 13 and 14, Carter et al. in view of Stewart disclose a system as recited in claim 9 above, the claims 13 and 14 same in that the claims 7 and 8 already addressed above therefore claims 13 and 14 are also rejected for the same reasons given with respect to claims 7 and 8.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carter et al. (US# 6,659,947) in view of Stewart (US# 5,835,061) as applied to claim 9 above, and in further view of Raleigh et al. (US# 6,101,399).

Referring to claim 11, Carter et al. in view of Stewart disclose a system as recited in claim 9, however, Carter et al. in view of Stewart did not explicitly disclose means for determining proximity includes quadratic optimization means.

In the same field of endeavor of wireless communication system, Raleigh et al. teach that means for determining proximity includes quadratic optimization means (column 3 lines 34 to 54; column 18 lines 1 to 19) in order to optimum transmit beam pattern.

One of ordinary skilled in the art recognizes the need to use the quadratic optimization means to determine the proximity of Raleigh et al. in multi-band access points of Carter et al. in view of Stewart because Carter et al. suggest it is desired to use multi-band access points to determine the location of location tracking and monitoring devices (column 5 lines 20 to 40) and Raleigh et al. teaches that determining proximity using the quadratic optimization means (column 3 lines 33 to 55; see Figure 1) in order to find the distance of mobiles object to the base station. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to use the quadratic optimization means to determine the proximity of Raleigh et al. in multi-band access points of Carter et al. in view of Stewart with the motivation for doing so would have been to provide the distance of location tracking devices from wireless LAN access points in order to collect the data and resolves them into positional estimates.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Carter et al. (US# 6,659,947) in view of Stewart (US# 5,835,061) as applied to claim 9 above, and in further view of Gamlyn et al. (US# 5,749,367).

Referring to claim 12, Carter et al. in view of Stewart disclose a system as recited in claim 9, however, Carter et al. in view of Stewart did not explicitly disclose means for determining proximity includes a neural network.

In the same field of endeavor of wireless communication system, Gamlyn et al. teach that means for determining proximity includes a neural network (column 1 lines 30 to 64) in order to obtain the monitor changes in the functioning or performance of a person.

One of ordinary skilled in the art recognizes the need to determine the proximity includes a neural network of Gamlyn et al. in determining the position by the network links of Carter et al. in view of Stewart because Carter et al. suggest it is desired to provide information regarding the position of location tracking devices and a wireless LAN access point (column 5 lines 20 to 40; see Figure 1) and Gamlyn et al. teaches that determining proximity includes a neural network (column 7 lines 26 to 48) in order to determine the vector is within or beyond a threshold range of the reference vectors. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to determine the proximity includes a neural network of Gamlyn et al. in determining the position by the network links of Carter et al. in view of Stewart with the motivation for doing so would have been to provide an output a signal in order to initiate an event such as the generation of an alarm or the storage of data.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nam V Nguyen whose telephone number is 703-305-3867. The examiner can normally be reached on Mon-Fri, 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on 703-305-4704. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Nam Nguyen
November 12, 2004



MICHAEL HORABIK
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